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REMARKS

Applicants appreciate the thorough examination of the present application as evidenced by the Office Action of February 2, 2006. Applicants have amended Claim 25 as set out above and, therefore, request withdrawal of the claims objections with respect thereto. Applicants further submit that Claims 22-27 are in compliance with 35 U.S.C. § 112 for at least the reasons discussed herein. Applicants have amended independent Claims 9, 15 and 21 as set out above and have amended Claims 12, 19 and 22 to conform to the amendment to Claims 9, 15 and 21, respectively. Accordingly, Applicants respectfully submit that the pending claims are patentable over the cited references for at least the reasons discussed herein.

The Claim Objections

Claim 25 stands objected as being redundant. *See* Office Action, page 3. Applicants have amended Claim 25 as set out above to recite "a temperature from about 600 to about 900" and, therefore, respectfully request withdrawal of the objections to these claims.

The Section 112 Rejections

Claims 22-27 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. *See* Office Action, page 3. In particular, the terms "first etch stop" and "second etch stop" in Claim 22 are objected to as being indefinite. Applicants respectfully submit that these recitations are not indefinite for at least the reasons discussed herein.

As stated in the specification of the present application:

It will be understood that although the terms first and second are used herein to describe various regions, layers and/or sections, these regions, layers and/or sections should not be limited by these terms. These terms are only used to distinguish one region, layer or section from another region, layer or section. Thus, a first region, layer or section discussed below could be termed a second region, layer or section, and similarly, a second region, layer or section may be termed a first region, layer or section without departing from the teachings of the present invention.

See Specification, page 4, line 34 to page 5, line 6. Accordingly, the terms first and second are interchangeable and, thus, first and second terms used in the specification do not necessarily have to directly correspond to first and second terms used in the claims.

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Accordingly, Applicants submit that Claims 22 and the claims that depend therefrom are in compliance with 35 U.S.C. § 112 for at least these reasons and, therefore, request withdrawal of the rejections with respect thereto.

Furthermore, the term "the etch stop layer" in Claim 27 is objected to as having no antecedent basis. *See* Office Action, page 3. Applicants have amended Claim 27 to recite "the first etch stop layer" and, therefore, respectfully request withdrawal of the rejections with respect thereto.

The Section 103 Rejections

Claims 9-27 stand rejected under 35 U.S.C. § 103 as being unpatentable over Applicant's Admitted Prior Art (hereinafter "AAPA") in view of United States Patent No. 6,696,368 to Derraa *et al.* (hereinafter "Derraa"). *See* Office Action, page 5. Applicants respectfully submit that many of the recitations of these claims are neither disclosed nor suggested by the cited combination for at least the reasons discussed herein. For example, Claim 9 recites:

A method of forming an integrated circuit device comprising:
forming a buried contact plug on a cell array region of an integrated circuit substrate;
forming a resistor on a peripheral circuit region of the integrated circuit substrate;
forming a first pad contact plug on the buried contact plug;
forming a second pad contact plug on the resistor;
forming an ohmic layer between the first pad contact plug and the buried contact plug and between the second pad contact plug and the resistor; and
forming a metal contact plug on the second pad contact plug in the peripheral circuit region.

Claims 15 and 22 have been amended to contain similar recitations to the highlighted recitations. Applicants respectfully submit that at least the highlighted recitations of Claim 9 are neither disclosed nor suggested by the cited references.

The Office Action admits that the AAPA does not teach many of the recitations of the Claim 9. *See* Office Action, pages 5-6. However, the Office Action points to Derraa as providing the missing teachings. *See* Office Action, page 5. Applicants respectfully disagree. As a preliminary note, Applicants respectfully submit that the combination of the AAPA and Derraa does not even teach many of the recitations of the claims as originally filed. However, Applicants have amended the independent claims as set out above to further

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highlight the differences between the claims of the present application and the teachings of the cited references and to expedite allowance of the present application.

In particular, the Office Action points to a plug that would be formed in the metal contact hole 24 of Figure 1 as teaching the second pad contact plug as recited in Claim 9. *See* Office Action, page 5. Accordingly, Applicants have amended Claim 9 to include the recitation of "forming a metal contact plug on the second pad contact plug." Nothing in the AAPA and/or Derraa discloses or suggests having two pad contact plugs and a metal contact plug formed on the second pad contact plug as recited in amended independent Claim 9. Accordingly, independent Claims 9, 15 and 22 are patentable over the cited references for at least the reasons discussed herein. Furthermore, the dependent claims are patentable at least per the patentability of the independent base claims from which they depend.

Many of the dependent claims are also separately patentable. The Office Action points to Derraa as providing many of the teachings of the dependent claims. *See* Office Action, pages 6-8. Applicants respectfully disagree. Derraa generally discusses conductive contacts in a semiconductor structure and methods of forming the same. *See* Derraa, Abstract. Nothing in the cited portions of Derraa disclose or suggest many of the teachings missing from the AAPA. For example, the AAPA (Figure 1) clearly does not teach first and second pad contact plugs (118a and 118b – Figure 2) as recited in Claim 9. Furthermore, the AAPA clearly does not teach a metal contact plug 140 on the second pad contact plug 118b as recited in Claim 9. The teaching of the ohmic layers 115 is also clearly lacking from the AAPA. The cited portions of Derraa generally discuss contact plugs, contact regions, conductive layers and the like. However, nothing in Derraa discloses or suggests using these elements in such a way to provide the missing recitations of Claim 9.

Accordingly, just because a reference generally discusses dielectric layers, adhesion layers and the like does not make a novel combination of such elements obvious. To provide a *prima facie* case of obviousness, the references, when combined, must teach each and every element of the claims. The cited combination clearly fails to teach each and every recitation of the pending claims. Thus, Applicants submit that the dependent claims are separately patentable over the cited combination for at least these additional reasons. Furthermore, Applicants respectfully request that, if the present rejection is maintained, the next Office Action point to where in the cited references the specific teachings are found.

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Applicants respectfully submit that many of the recitations of the pending claims are neither disclosed nor suggested by the cited combination. Furthermore, Applicants respectfully submit that there is no motivation or suggestion to combine the cited references as suggested in the Office Action. As affirmed by the Court of Appeals for the Federal Circuit in *In re Sang-su Lee*, a factual question of motivation is material to patentability, and cannot be resolved on subjective belief and unknown authority. See *In re Sang-su Lee*, 277 F.3d 1338 (Fed. Cir. 2002). It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 U.S.P.Q. 303, 312-13 (Fed. Cir. 1983).

The motivations provided in the Office Action on pages 6-8 are clearly based on "subjective belief and unknown authority", the type of motivation that was rejected by the Federal Circuit in *In re Sang-su Lee*. In other words, the Office Action does not point to any specific portion of the cited references that would induce one of skill in the art to combine the cited references as suggested in the Office Action. Accordingly, the statements in the Office Action with respect to motivation does not adequately address the issue of motivation to combine as discussed in *In re Sang-su Lee*. Thus, it appears that the Office Action gains its alleged impetus or suggestion to combine the cited references by hindsight reasoning informed by Applicants' disclosure, which, as noted above, is an inappropriate basis for combining references.

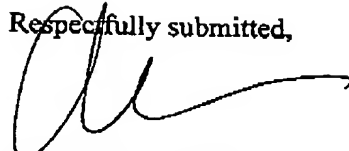
Accordingly, amended Claims 1, 15 and 22 are patentable over the cited references for at least the reasons discussed herein. Furthermore, the dependent claims are patentable at least per the patentability of the independent base claims from which they depend.

CONCLUSION

Applicants respectfully submit that the pending claims are patentable over the cited references for at least the reasons discussed herein. Accordingly, Applicants respectfully submit that the pending claims are in condition for allowance, which is respectfully requested in due course.

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CERTIFICATION OF FACSIMILE TRANSMISSION UNDER 37 CFR § 1.8

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Erin A. Campion